



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,843	06/27/2003	Hideo Yokota	ASAIN0126	4814
24203	7590	04/04/2006	EXAMINER	
GRIFFIN & SZIPL, PC SUITE PH-1 2300 NINTH STREET, SOUTH ARLINGTON, VA 22204			SANDERS JR, JOHN R	
			ART UNIT	PAPER NUMBER
			3735	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Drawings

1. The drawings are objected to because in Fig. 1, the words “mage” should read --image--.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-4 are objected to because of the following informalities: The preamble states “methods” when only the single method is claimed. Appropriate correction is required.
3. Claim 3 is objected to because of the following informalities: The limitation “the corresponding points” in line 5 lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 5 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The program recited in the claims is considered non-statutory matter since claims to software or a program that does not recite a tangible computer readable medium have been determined to be insufficient to be considered a machine, manufacture, or a process. See MPEP §2106 IV B 1(a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 3735

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,766,016 to Sinclair et al ("Sinclair") in view of U.S. Patent No. 5,353,073 to Kobayashi ("Kobayashi") and U.S. Patent No. 6,454,410 to Berger et al ("Berger").

8. Sinclair discloses a surgical simulator for ophthalmic surgery wherein a virtual model of the eye is created to provide a trainee with a simulated image of an eye for a simulated surgical procedure. Sinclair discloses taking photographs of an actual eye, including the retina, and texture mapping said photographs on geometric surfaces to develop the three-dimensional model of the eye (col. 8, lines 33-41).

9. Sinclair does not disclose measuring the eye to determine the geometric surface or taking and mapping multiple images of the retina to form the three-dimensional model.

10. Kobayashi teaches a three-dimensional shape measurement system capable of determining the shape of the fundus of the eye (see abstract, summary).

11. Berger teaches a method of creating a mosaic image of the retina from multiple overlapping images (col. 3, line 57 - col. 5, line 19).

12. At the time of the invention, it would have been obvious to one of ordinary skill in the art, when considering the patents to Sinclair, Kobayashi, and Berger, to modify the virtual eye model of Sinclair to obtain the geometrical surface of the retina via a measurement system in order to have the model surface correspond to the actual shape of the retina, as in Kobayashi, and to modify the texture mapped image of the retina applied to said geometrical surface to be a mosaic of individually acquired images, as in Berger, in order to have a more comprehensive

Art Unit: 3735

image of the retina for said model. Regarding the limitations of matching images to the eyeground template, routines for texture mapping of two-dimensional images to three-dimensional surfaces are known in the art and include any number of processing routines for calculating relative offsets and coordinate transformations between a planar surface and a three-dimensional surface in order to place said images onto said three-dimensional surface. One of ordinary skill in the art would be apprised that to map a 2-D image to 3-D surface, a positional relationship between the two would necessarily defined and utilized to perform said mapping.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Sanders whose telephone number is (571) 272-4742. The examiner can normally be reached on M-F 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

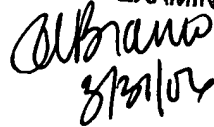
Art Unit: 3735

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JRS
29 March 2006

PATRICIA BIANCO
PRIMARY EXAMINER


3/29/06